

AMENDMENTS TO THE CLAIMS

1.-9. (Cancelled)

10. (New) A disposable cartridge for use in blood testing comprising:

(a) a housing including multiple depressions formed on one surface of said housing, each of said depressions defining a main portion of a receptacle and connecting to at least one of channels disposed within said housing;

(b) a diaphragm sealing said multiple depressions and forming multiple said receptacle; portions of said diaphragm over said depressions being flexible; and

(c) a valve disposed within said housing among said channels adapted to interconnect selected channels for directing flow between selected receptacles.

11. (New) The disposable cartridge of claim 10, wherein one or more of said depressions includes a sealed opening adapted to interface with a needle of a cell counting device.

12. (New) The disposable cartridge of claim 11, wherein at least one of said receptacles contains a liquid diluting agent.

13. (New) The disposable cartridge of claim 12, wherein one of said receptacles contains a haemolysis agent.

14. (New) The disposable cartridge of claim 10, wherein said valve is a slide valve and displacement of a valve slide of said slide valve interconnects selected channels between selected receptacles.

15. (New) The disposable cartridge of claim 14, wherein said slide valve comprises at least one channel in said valve slide in communication with a blood sampling capillary tube,

and displacement of said valve slide causes displacing a volume of a blood sample within said channel of said valve slide into one of said receptacles.

16. (New) The disposable cartridge of claim 10, wherein said housing has integrated therein a light path for performing photometric measurement on material contained in at least one of said receptacles.

17. (New) The disposable cartridge of claim 10 further comprising an additional depression sealed by said diaphragm forming an additional receptacle; said additional depression having a sealed opening adapted to interface with a needle of a cell counting device; and said additional receptacle containing a washing liquid for cleaning said cell counting device.

18. (New) A method of preparing a blood sample for blood measurement comprising:
providing a cartridge comprising a housing including multiple depressions formed on one surface of said housing and a diaphragm sealing said multiple depressions and forming multiple receptacles, portions of said diaphragm over said depressions being flexible; each of said depressions connecting to at least one of channels disposed within said housing adapted to interconnect at least two of said receptacles; a first of said receptacles containing a liquid diluting agent;

applying pressure on a flexible portion of said diaphragm over said first of said receptacles, causing said liquid diluting agent flowing into a second of said receptacles through one of said channels, thereby carrying a portion of a blood sample introduced in said one of said channels into said second of said receptacles;

applying pressure on a flexible portion of said diaphragm over said second of said receptacles, and causing a mixture of said blood sample and said liquid diluting agent flowing back to said first of said receptacles through said one of said channels; and

repeating applying pressure on said flexible portions of said diaphragm over said first and said second of said receptacles to cause said mixture flowing back and forth between said first and said second of said receptacles to achieve proper mixing of said blood sample with liquid

diluting agent, thereby obtaining a diluted sample.

19. (New) The method of claim 18, wherein said applying pressure is performed by pressing, applying a hydraulic or pneumatic pressure, or applying a vacuum over said first or said second of said receptacles.

20. (New) The method of claim 19 further comprising:
introducing a portion of said diluted sample into a third of said receptacles through one or more of said channels, wherein said third of said receptacles also contains said liquid diluting agent;

applying pressure on a flexible portion of said diaphragm over said third of said receptacles, and causing a further mixture of said diluted sample and said liquid diluting agent flowing into a fourth of said receptacles through one or more of said channels;

applying pressure on a flexible portion of said diaphragm over said fourth of said receptacles, and causing said further mixture flowing back to said third of said receptacles through said one or more of said channels; and

repeating applying pressure on said flexible portions of said diaphragm over said third and said fourth of said receptacles to cause said further mixture flowing back and forth between said third and said fourth of said receptacles to achieve proper mixing of said diluted sample and said liquid diluting agent, thereby obtaining a further diluted sample.

21. (New) The method of claim 20 further comprising:
delivering said further diluted sample to a cell counting device for red blood cell testing, through a needle connected to said cell counting device through a conduit, said needle being inserted into a sealed opening located in said third of said receptacles.

22. (New) The method of claim 21, wherein said cartridge further comprises an additional depression sealed by said diaphragm forming an additional receptacle, said additional receptacle containing a washing liquid; and wherein said method further comprises withdrawing

said washing liquid from said additional receptacle to said cell counting device for cleaning and causing said washing liquid entering one of said receptacles through said conduit, thereby returning said further diluted sample back to said cartridge after said testing.

23. (New) The method of claim 18 further comprising:

introducing another portion of said diluted sample into a fifth of said receptacles through one of said channels, wherein said fifth of said receptacles contains a haemolysis agent;

applying pressure on a flexible portion of said diaphragm over said fifth of said receptacles, and causing a mixture of said diluted sample and said haemolysis agent flowing into one of the other receptacles through one or more of said channels;

applying pressure on a flexible portion of said diaphragm over said one of the other receptacles, and causing said mixture of said diluted sample and said haemolysis agent flowing back to said fifth of said receptacles through said one or more of said channels; and

repeating applying pressure on said flexible portions of said diaphragm over said fifth and said one of the other receptacles to cause said mixture of said diluted sample and said haemolysis agent flowing back and forth between said fifth and said one of the other receptacles to achieve proper mixing of said diluted sample with said haemolysis agent.

24. (New) The method of claim 23 further comprising:

delivering said mixture of said diluted sample and said haemolysis agent to a cell counting device for white blood cell testing, through a needle connected to said cell counting device through a conduit, said needle being inserted into a sealed opening located in said fifth of said receptacles.

25. (New) The method of claim 24 further comprising:

performing a photometric measurement on said mixture of said diluted sample and said haemolysis agent in said fifth of said receptacles using a light path integrated in said fifth of said receptacles.

26. (New) The method of claim 25, wherein said cartridge further comprises an additional depression sealed by said diaphragm forming an additional receptacle, said additional receptacle containing a washing liquid; and wherein said method further comprises withdrawing said washing liquid from said additional receptacle to said cell counting device for cleaning and causing said washing liquid entering one of said receptacles through said conduit, thereby returning said mixture of said diluted sample and said haemolysis agent back to said cartridge after said testing.

27. (New) The method of claim 18, wherein said portion of a blood sample is introduced by a valve interconnecting said channels.